AMENDMENTS TO THE CLAIMS

The listing of claims below replaces all prior listings.

1-87. (Canceled)

88. (Currently amended) An isolated antibody or antigen-binding fragment thereof which specifically binds to a ~~TGF β binding protein, wherein said binding protein comprises a~~ polypeptide, wherein said polypeptide is encoded by a first polynucleotide capable of binding under conditions of high stringency to a second polynucleotide selected from the group consisting of SEQ ID NOS: 1, 5, 9, 11, 13 and 15, and fully complementary sequences thereto, and wherein said polypeptide retains a cysteine backbone comprising eight cysteines and retains the ability to alter bone density. ~~encoded by a first polynucleotide that is capable of binding to a second polynucleotide under conditions of high stringency ,~~

~~wherein the second polynucleotide comprises a nucleotide sequence that is fully complementary to a sequence selected from the group consisting of SEQ ID NOS:1, 5, 9, 11, 13, and 15, or a complementary sequence thereto which encodes a TGF β binding protein, and~~

~~wherein high stringency conditions comprise prewashing in 60 mM Tris pH 8.0, 2 mM EDTA, 5x Denhardt's, 6x SSC, 0.1% (w/v) N-laurylsarcosine, 0.5% (w/v) NP-40® (nonidet P-40) overnight at 45°C, followed by two washes with 0.2x SSC containing 0.1% SDS at 45-50°C.~~

89. (Currently amended) An isolated antibody or antigen binding fragment thereof which specifically binds to a ~~TGF β binding protein, wherein said binding protein comprises~~ a polypeptide encoded by a polynucleotide having at least 90% identity to a full length sequence selected from SEQ ID NOS: 1, 5, 9, 11, 13, and 15, or a complementary sequence thereto, wherein said polypeptide retains a cysteine backbone comprising eight cysteines and retains the ability to alter bone density.

90. (Canceled)

91. (Previously Presented) The antibody or antigen binding fragment thereof of either claim 88 or claim 89 wherein the isolated antibody or binding fragment thereof is a polyclonal antibody.

92. (Previously Presented) The antibody or antigen binding fragment thereof of either claim 88 or claim 89 wherein the isolated antibody or binding fragment thereof is a monoclonal antibody.

93. (Previously Presented) The antibody or antigen binding fragment thereof of either claim 88 or claim 89 wherein the isolated antibody or binding fragment thereof is a humanized antibody.

94. (Previously Presented) The antibody or antigen binding fragment thereof of either claim 88 or claim 89 wherein the antibody or antigen binding fragment has an affinity of at least 10^{-7} M.

95. (Previously Presented) The antibody or antigen binding fragment thereof of either claim 88 or claim 89 wherein the antibody or antigen binding fragment has an affinity of at least 10^{-8} M.

96. (Previously Presented) A hybridoma that produces an antibody according to either claim 88 or claim 89.

97. (Withdrawn/Currently amended) A method of producing monoclonal antibodies, comprising immunizing an animal with a ~~TGF β binding~~ protein ~~or portion thereof, wherein said binding protein~~ comprising a polypeptide [[is]] selected from the group consisting of (i) a polypeptide, or portion thereof, that is encoded by a polynucleotide that comprises a nucleotide sequence selected from SEQ ID NOs:1, 5, 7, 9, 11, 13, and 15, or a complementary sequence thereto ~~which encodes a TGF β binding protein~~, and (ii) a polypeptide that comprises an amino acid sequence selected from SEQ ID NOs: 2, 6, 8, 10, 12, 14, and 16, wherein said polypeptide retains a cysteine backbone comprising eight cysteines and retains the ability to alter bone density.

98. (Withdrawn) A method for production of an antibody according to either claim 88 or claim 89 comprising culturing hybridoma cells under conditions that permit the production of said antibody.

99. (Withdrawn) A method for production of an antibody or binding fragment thereof of either claim 88 or claim 89, comprising:

(a) providing a recombinant host cell capable of producing said antibody or binding fragment thereof; and

(b) culturing said cell under conditions that permit the production of said antibody or binding fragment.

100. (Withdrawn/Currently amended) A method for immunizing an animal to produce a cell capable of expressing an antibody that binds to a polypeptide ~~TGF-β binding protein~~, comprising injecting into an animal ~~a TGF-β binding protein~~ said polypeptide, or portion thereof, wherein said ~~binding protein~~ polypeptide is selected from the group consisting of:

(i) a polypeptide encoded by a polynucleotide that comprises a nucleotide sequence selected from SEQ ID NOs: 1, 5,7,9, 11, 13, and 15, or a complementary sequence thereto, and

(ii) a polypeptide that comprises an amino acid sequence selected from SEQ ID NOs:2, 6, 8, 10, 12, 14, and 16,

wherein said polypeptide retains a cysteine backbone comprising eight cysteines and retains the ability to alter bone density.